SCAP Monthly Update

www.scap1.org August 2011

SCAP STAFF

John Pastore, Executive Director
jpastore@scap1.org

Pam Merriam, Administrator
pmerriam@scap1.org

Ray Miller, E. D. Emeritus
rmiller@scap1.org

Southern California Alliance of
Publicly Owned Treatment Works
P.O. Box 231565
Encinitas, CA 92024-1565
Ph. (760) 479-4880
Fax (760) 479-4881

Executive Director's Message

SAN DIEGO'S PROACTIVE APPROACH-TESTS NEW WATER FACILITY

SOCALGAS BIOGAS TREATMENT PROJECT

It just dawned on me that never before have there been so many new and innovative technology-driven projects being undertaken by our members as there is at the present time. In the coming months I hope to explore with each of our members their "*out of the ordinary" projects* they might have underway that would be of interest and benefit to our membership.

Without a lot of fanfare one of our largest SCAP members, the City of San Diego, is quietly evaluating an exciting, yet proven technology that will potentially open the door to a new local source of water for the San Diego region. A new test facility located in northern San Diego, the Advanced Water Purification Facility, is a small-scale, state-of-the-art water purification facility that purifies one million gallons of recycled water every day to a level similar to distilled water quality.

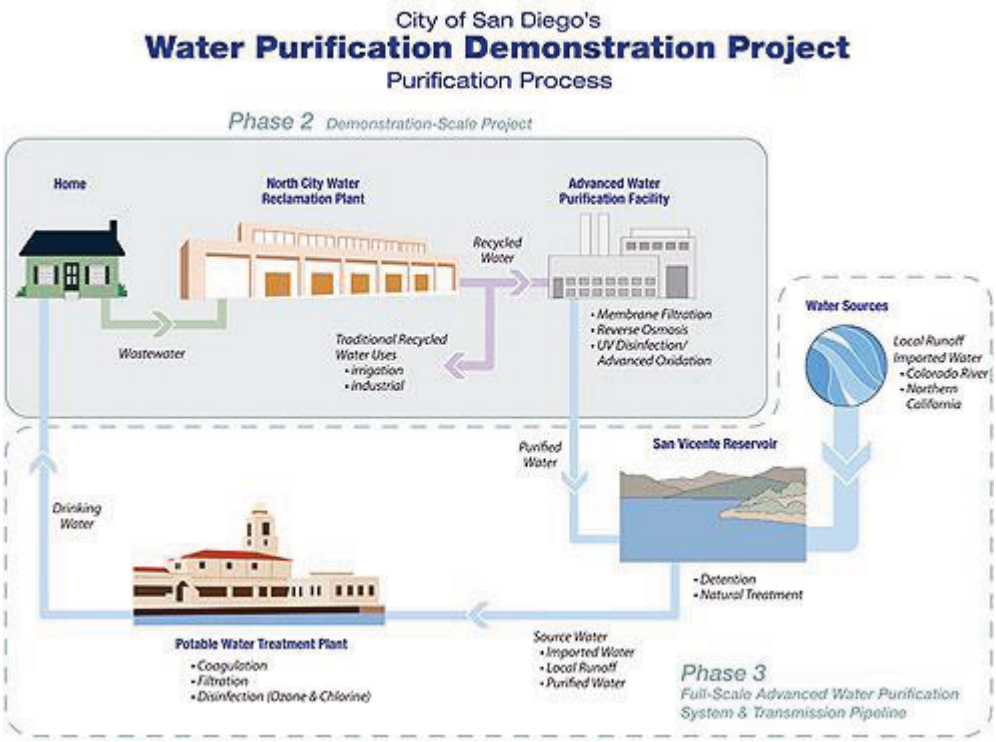
City of San Diego's Advanced Water Purification Facility

Actually, the facility is just one component of the City's Water Purification Demonstration Project that is examining the safety and cost of purifying recycled water. In a turnaround from years past, this project is receiving positive press from the media and potential customers alike. If approved to go full-scale, the purified water would blend with the City's imported supplies at San Vicente Reservoir and would become part of the City's potable water supply

As another component of the Demonstration Project, the City is studying San Vicente Reservoir and the potential effects of adding purified water to it. The testing phase of this demonstration is expected to take a year during which time the purified water will not be sent to San Vicente Reservoir or the City's drinking water system; instead, the purified water will be added to the City's recycled water system.

Much like many of our member agencies with limited water supply options, San Diego is taking a proactive approach to developing a locally controlled, supplemental water supply to lessen its dependence on expensive and limited imported water supplies. San Diego's semi-arid region is at the end of pipelines that import water from hundreds of miles away. An enthusiastic proponent of the City's Water purification demonstration Project, San Diego Mayor Jerry Sanders recently stated, "A locally produced supply of water could be an important option for us. Our City has been both creative and aggressive in trying to diversify our water supply. The less we rely on importing water from outside San Diego County, the more we control our own destiny." Said Mayor Sanders, "We owe it to our citizens to see if we can come up with an alternative source of local, safe and relatively inexpensive drinking water. This Demonstration Project will provide the answers San Diego needs before taking the next step with purified water".

The same water purification process that the City of San Diego is testing is already in use around the world. Another SCAP member, the Orange County Water District, operates the world's largest water purification plant. The Orange County Groundwater Replenishment System produces up to 70 million gallons a day of ultra clean water to provide safe and reliable drinking water for nearly 600,000 residents. The purified water is produced from secondary-treated wastewater obtained from its next door neighbor, the Orange County Sanitation District, and injected into the county's drinking water aquifer.



The City of San Diego operates the North City Water Reclamation Plant (NCWRP), which provides both initial and advanced wastewater treatment to a portion of the City's wastewater flow. After treatment the recycled water is

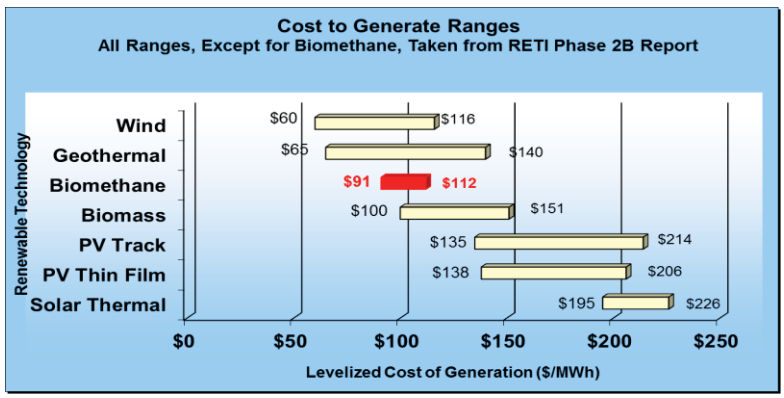
distributed to city customers for irrigation and industrial uses. Now, as part of the Demonstration Project, a portion of the recycled water produced at the NCWRP will be sent to the City's Advanced Water Purification Facility, where

recycled water undergoes the multi-barrier purification process, which includes membrane filtration, reverse osmosis, and advanced oxidation with ultraviolet disinfection and high-strength hydrogen peroxide. The multi-barrier approach of consecutive treatment steps work together to remove or destroy all unwanted materials in the water and produces one of the most pristine supplies of water available anywhere. Each step in the process also includes continuous water quality monitoring through laboratory tests and computer analysis to ensure that it meets public health standards.

The data from the Demonstration Project will be thoroughly examined, and the results will determine the safety and cost of a full-scale water purification and reservoir augmentation project. After the test phase is complete, the City Council and Mayor will decide whether to implement a full-scale project.

For more information about the City of San Diego's Water Purification Demonstration Project, visit www.purewatersd.org, email purewatersd@sandiego.gov, or call (619)533-7572.

As long as we are previewing the on-goings down in the San Diego County area, we might as well look at another extremely interesting demonstration project. The SCAP Energy Management Committee recently conducted a tour of the Southern California Gas Company's (SoCalGas) Biogas Treatment Facility Demonstration Project currently in operation at the City of Escondido's Hale Avenue Resource Recovery Facility (HARRF) utilizing Pressure Swing Absorption technology. The City and SoCalGas have been testing the effectiveness of a pressure swing absorption system at the Hale Avenue Plant to upgrade biogas from the Plant's anaerobic digesters through a multistage process to produce pipeline quality renewable natural gas. The demonstration project is funded by SoCalGas' research, development and demonstration program and is intended to demonstrate the ability to produce pipeline quality gas from POTWs that can be sold to third party users through an intertie to SoCalGas pipelines pursuant to Rule 39 guidelines. The operating equipment includes gas pre-treatment, H2S and Siloxane removal, gas compression and PSA resulting in the production of enough renewable natural gas to serve about 1,200 homes or fuel several dozen natural gas powered buses, yet takes up very little space with a footprint of only 55'X8' comprising 4 skids of varying length (not including 2 sheds housing monitoring equipment).



Past committee meetings have touched on energy efficient technology and low cost renewable energy projects in order to provide members with a broad range of available alternatives. While this type of project provides a low cost renewable energy source compared to others, it may not be for everyone. For a POTW that flares its digester gas or produces excess gas, this may be an appealing alternative. However, there are associated up-front costs that under one option would include equipment purchase and a negotiated intertie agreement with SoCalGas. For further information please refer to the SoCalGas presentation on the SCAP website.